DOCUMENT RESUME

ED 342 966 CE 060 567

TITLE	A Model for Self-Paced Audio Visual Laboratory in Vocational Education Programs. Final Report.
INSTITUTION	Arkansas Valley Vocational Technical School, Ozark.
SPONS AGENCY	Arkansas State Dept. of Education, Little Rock. Div. of Vocational and Technical Education.
PUB DATE	Jun 91
NOTE	18p.; Newspaper photo will copy poorly.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Auto Mechanics; Business Education; Cosmetology; Educational Innovation; Education Work Relationship; Foods Instruction; *Individualized Instruction; *Learning Modules; Material Development; *Pacing; Postsecondary Education; Programed Instructional Materials; *School Business Relationship; Video Equipment; *Vocational Education

ABSTRACT

Since people learn in many different ways, and since the traditional style of teaching may not be the best way to teach many students, a 3-year program developed and implemented articulated, self-paced instructional materials in five vocational areas (automotive service technology, cosmetology, food laboratory technology, business education, and video production) and sought to increase the use of instructional resources at Arkansas Valley Vocational Technical School. The program also helped area companies to respond to the training needs of their employees and increased the visibility of vocational-technical education within the economic community. Learning packets of instructional materials were created, each focusing on a particular competency in a vocational area. Packets included information sheets, videotapes, diagrams, exercises, and self-tests, in order to give students a variety of self-paced learning activities. Appendixes present an outline of the student management system, designed by Cynthia J. Lanphear, used to guide students through the learning modules, and copies of the follow-up survey, the evaluation form, and a newspaper photograph. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

AR91C001

ED342966

FINAL REPORT

A MODEL FOR SELF-PACED AUDIO VISUAL LABORATORY IN VOCATIONAL EDUCATION PROGRAMS

Conducted by

Arkansas Valley Vocational Technical School
Ozark, Arkansas 72949
Carl Jones, Director

In Cooperation with
Vocational and Technical Education Division
Arkansas Department of Education
Little Rock, Arkansas 72201

Funded under the Provisions of
P.O. 98-524

June 1991

CE 060567

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

PROJECT ABSTRACT

Research in education has shown that people learn in many different ways, and the traditional style of teaching (oriented toward listening and reading) may not be the best way to teach many students. The program proposed in this paper will provide additional teaching methods to help students learn and reinforce material through using a combination of learning styles. This will be achieved through several objectives: 1) to develop and implement articulated self-paced instructional materials in five vocational areas; 2) to increase the use of instructional resources. In addition to the objectives to be achieved at Arkansas Valley Vocational Technical School, the program has two objectives which will involved the school in a partnership with area businesses and industries. These objectives are: 1) to aid area companies in responding to the training needs of their employees; and 2) to increase the visibility of vocational technical education within the economic community.

A resource coordinator will plan and produce "learning packets," a group of instructional materials which focus on one particular competency in a vocational area. These learning packets will include materials such as information sheets, videotapes, diagrams, exercises, and self-tests in order to give students a variety of self-paced learning activities. The learning packets will be produced in the areas of automotive technology and other vocational program. Vocational instructors may use the learning packets in several ways, including use as primary instructional materials, as supplemental instructional materials, and as optional resource materials.

The resource coordinator will also work with representatives of interested companies to plan and produce learning packets which the companies can use to train employees.

For some students, the traditional lecture-oriented classes which move at an "average" pace are completely unsatisfactory. These students may become discouraged or bored and as a result, may decide to drop out of school. The learning packets which will be produced by this program will allow students to work at their own pace using a variety of learning materials, thus increasing the chances a student will be successful and choose to stay in school. The program will create a series of well-planned and well-produced instructional materials which could be used by other vocational and technical program in addition to those at Arkansas Valley Vocational Technical School. Finally, the cooperation the program will produce between the school and area companies will benefit both vocational technical education and the companies. The companies will receive quality training materials which they (especially smaller companies) may not have been able to obtain in the past, and vocational technical education will have an opportunity to "show off" for the economic community by providing this help.

SELF-PACED AUDIO VISUAL LABORATORY

Introduction

Research in education has shown that people learn in many different ways, and the traditional style of teaching (oriented toward listening and reading) may not be the best way to teach many students. Also, depending on the subject area students are striving to master, the traditional way of presenting material may not necessarily be the most appropriate. This is especially true in vocational education where proficiency is gauged on performance of various practical skills. Also, some students--because of learning disabilities, illiteracy, poor study habits and various other elements, need extra time and practice with materials. There are also the students that do not need extra time with material. They are the extremely bright, skillful, intelligent students. It is a well known dilemma in education that these two categories of students, along with the average performers are most often found in the same classroom.

In contemplating solutions to this realization, a program to incorporate both the different presentation of material and the variety of learning requirements found in students was needed. New curriculum needed to be developed for students with special needs. New reinforcement techniques needed to be incorporated into the material. Supplementary material needed to be included to enhance the curriculum already in use. New activities needed to be designed that would also supplement the material.

In an effort to alleviate some of these dilemmas, Arkansas Valley

Vocational Technical School implemented the Self-Paced Audio Visual Instruction Lab. The lab was designed with flexibility in mind so that several major objectives and constituencies could be approached.

Objectives

The Self-Paced Audio Visual Instruction Lab project was one that allowed students to progress at their own best pace until they have acquired the necessary competencies for entry level employment into their chosen occupation area. The major goals and objectives of this project were:

1. to develop and implement articulated self-paced instructional material in several vocational areas;
2. to increase the use of instructional resources;

One additional objective involved the school in a partnership with the local community, which was:

1. to increase the visibility of vocational technical education within the economic community.

Procedures

A resource coordinator was hired to plan and produce "Learning Activity Packages," a group of instructional materials which focused on the one particular competency in a vocational area. These packages varied in design depending on the most appropriate method for presenting the material. Generally, the packages contained information sheets, programmed instruction, videotapes, diagrams, exercises such as vocabulary exercises, audiotapes, tests, and learning experiences.

The method of instruction varied according to whatever the

resource coordinator deemed to be the most effective for a particular competency. Some areas were strictly self-paced while other were group oriented. For instance, the programmed instruction might be self-paced per individual while chemistry labs were group activities.

Determination of subject area for the learning activity packages was a joint effort on the part of the administration, the instructors, and the resource coordinator. Any instructor was free to pursue the development of new curriculum while the administration had final approval of projects for the resource coordinator to undertake.

The first area of concentration was Automotive Service Technology. Curriculum development in the area of Automatic Transmissions was desperately needed due to the fact that none existed for the vocational student enrolled in Automotive Service Technology. It was decided that several units of study would be developed starting at the beginning with basic concepts and leading up to the most complicated schematic of front wheel drive transmissions. These learning activity packages included all of the aforementioned elements in addition to practical shop experiences involving actual performance of certain competencies such as assembly and disassembly of all types of transmissions. Everything the students did in these packages was closely monitored by the resource coordinator and the instructor. An overall competency of 80% was required to move through to the next level.

During the time that the curriculum was being developed, a Student Management System was also designed by the resource coordinator. In the beginning, this system was specifically for Automatic Transmissions, but

then became the master system for managing students for all subsequent area. (See Appendix A)

After the first three units of study were developed, field testing with students began. From this point on, the project was in "full swing." Activities broadened to include other academic areas as well as other methods of presentation. Also, the community involvement aspect blossomed with regard to video production.

As time passed and educators became aware of the capability the Self-Pace Audio Visual Instructional Lab represented, a wide variety of activities were undertaken. These activities included everything from transferring filmstrips that could not be replaced over to videotapes through the actual creation of study guides, programmed instruction, and new classroom activities that reinforced learning. The resource coordinator also became the liaison for other types of media acquisition. For instance, the local educational television station had a reading program that was being used by the Adult Education instructor. Permission was granted to the resource coordinator to copy the program so that Arkansas Valley would be able to use the program repeatedly for nonreaders.

Throughout the duration of this project new curriculum was constantly being develop, field tested, evaluated, and reworked. Design changes were tried in the Learning Activity Packages when needed. New equipment was added to the video lab to enhance visual presentations. Also, new video productions were being created to support the school as well as the surrounding communities.

Evaluation

During each phase of production whether it was new written curriculum or a new video production, a written evaluation was completed by the students and the instructors, (See Appendix B and C). Based on these evaluations, the Learning Activity Packages were altered and improved.

The most outstanding evaluation made by a student occurred after she had successfully passed her State Board of Examination for Cosmetology. This student had worked through three units of Cosmetology based Chemistry as had the entire department. That particular year, 100% of the students who took the State Board of Examination, passed with excellent marks. The Cosmetology instructor explained that sometimes up to 80 of the written test was Chemistry. This particular student attributed her success to the Learning Activity Packages on Cosmetology based Chemistry.

The overall evaluation of this project as judged by the resource coordinator would be one of great satisfaction and success.

Conclusions and Recommendations

Attempting to create curriculum specific enough to cover the material in depth but broad enough to be used by a wide variety of students is not as easy task. However, it is a task that needs to be continued especially in the vocational arena.

During the course of this three year project the following Learning Activity Packages were created:

AUTOMOTIVE SERVICE TECHNOLOGY

1. Automatic Transmission, Vol. 1. Three units of study on basic elements of automatic transmissions. This Learning Activity Packages included 3 audio tapes and 2 videotapes along with the written material and tests.

2. Automatic Transmissions, Vol. 2. Three units of study of specific types of transmissions. This Learning Activity Package included 3 audiotapes and 4 videotapes along with the written material and tests.

3. Steering and Suspension Systems. A study guide supplement that accompanied a specific textbook in use at the time.

4. Braking Systems. A study guide supplement that accompanied a specific textbook in use at the time.

COSMETOLOGY

1. Chemistry in Cosmetology, Vol. 1. Three very large units of study that actually replaced the area of the required text that covered the same subject. This volume included 3 audiotapes and 2 videotapes along with the written material and tests. There were actual chemistry lab experiences in this volume. This volume encompassed much more chemistry than any textbook written for cosmetologists.

FOOD LAB TECHNOLOGY

1. Gram Staining Techniques. A question and answer study guide that incorporated several of the required textbooks into one comprehensive unit on a particular lab technique. This unit also included actual lab experiences.

BUSINESS EDUCATION

1. Introduction to Computer, Computer Hardware. A fully comprehensive study of computer hardware designed into a Learning Activity Package. This LAP actually replaced the unit from the textbook in use. It incorporates information from numerous sources into one unit of study complete with programmed instruction, writing assignments, and tests.

The community oriented efforts were in the video production area and included the following:

1. "Step into the Future with New Programs." A 9-minute promotional video for Arkansas Valley Vocational Technical School to use

when sharing their offerings with local economic developers and industries. Two version of this video were available. One was complete with narration while the other provided a music track only so that the speaker to narrate live during viewing.

2. Ozark Area Chamber of Commerce industrial video. This was a 15 minute documentary on the local area for use when promoting the area for economic development. This videotape was also a portion of the presentation made by the Ozark Area Chamber of Commerce to the State of Arkansas Chamber of Commerce. This presentation won statewide recognition.

3. "Our Product is Quality." A comprehensive look at the departmental offerings at Arkansas Valley Vocational Technical School. There were also two versions of this video. One highlighted the most highly technical trade areas (7 minutes) while the other, longer version, (15 minutes) covered all areas of training offered on campus as well as satellite campuses.

4. North Logan County. Another economic development promotional video (approx. 20 minutes) for a neighboring county including interviews with all of the major industrial leaders.

The Self-Paced Audio Visual Instruction Lab is considered a major undertaking for any school. Its flexibility in design is imperative for maximum utilization of facilities. Also, this project is not one that can easily be started without the proper funding or the proper personnel. Video production is not cheap. The personnel requirement is extreme dedication to what may sometimes seem a slow moving target. Good writing skills for the personnel is a must. A writing style must

be formed for the curriculum side which is very clear and easily understood while at the same time another writing style must be used for scripting of videotapes. Once an institution makes the decision to incorporate this kind of project, it must decide to support it in the long term, due to the funding requirements of equipment.

This pilot project at Arkansas Valley Vocational Technical School represents the only one of its kind in the State of Arkansas, and, in the eyes of those involved--it was an extremely rewarding and successful three years!

BEST COPY AVAILABLE

SELF-PACED AUDIO VISUAL LAB

STUDENT MANAGEMENT SYSTEM

Submitted by

Cynthia J. Lanphear

March 1, 1989

BEST COPY AVAILABLE

STUDENT MANAGEMENT SYSTEM

INTRODUCTION

Below is an overall description of how the student in Automatic Transmissions, in conjunction with the Automotive Service Technology Instructor and the Self-Paced Lab Resource Coordinator, will manage the student's learning processes through the use of the recently developed Learning Activity Packages. This management system is designed for smooth flow and minimal confusion for the student. It is also designed for very close monitoring of the student's progress. With this management system, the student has taken responsibility for their own learning pace as well as proficiencies. Some of the keys to successful learning accomplished through this approach include:

1. the extra time the student devotes to their particular problem area
2. the additional instruction provided by the Self-Paced Lab
3. customized instructional materials that supplement the already existing classroom and lab instruction
4. concentrated attention and correlation between learning activities and actual job competencies

The following is a description of how students are introduced, monitored and assisted through this individualized approach to learning.

BEST COPY AVAILABLE

STUDENT MANAGEMENT SYSTEM

STEP-BY-STEP GUIDELINES

1. All students are enrolled in Automotive Service Technology

2. When Automatic Transmissions begin, some students, as identified by the instructor will need extra practice/instruction/time.

3. Students report to the Self-Paced Lab Resource Coordinator for orientation to the Learning Activity Packages and Competency Based Education

4. Instruction begins with Volume 1, Unit 1 in the Learning Activity Package

5. Students turn in required paperwork, as specified in the Unit Activity Guide, in the envelope provided, by Unit as they complete all necessary activities.

6. Self-Paced Lab Resource Coordinator sets up files on each student. Inside the file is a master list (per unit) of required activities. The grades are recorded on this master list much like an individualized grade book. Also, there is a competency profile for each student where the scores on each of the Learning Experiences are recorded. This establishes two sources; cognitive knowledge and competencies that are monitored throughout the Learning Activity Packages.

7. Posted on the wall, in the Resource Center, is a Progress Chart that lists each student down the left side and each activity across the top. This is for the students' benefit. As they complete an activity, they can check themselves off as a means of controlling and monitoring their own progress.

8. Located in the Self-Paced Lab will also be a master grade book for all students enrolled in the individualized instruction.

9. At the end of each unit of instruction is an evaluation form that is completed by the student and filed in the Master file for the class. The final tabulations are also forwarded to to the appropriate administrative departments locally and state wide.

BEST COPY AVAILABLE

VoTech

P.O. Box 506
Ozark, AR 72949
(501) 667-2117
Carl Jones, Director

Vocational & Technical Education Division
Arkansas Department of Education

FOLLOW UP SURVEY

COMPANY NAME: OZARK AREA CHAMBER OF COMMERCE

ADDRESS: P. O. BOX 283

CITY: OZARK, STATE AR ZIP 72949

NAME AND TITLE: Mary Yates, Exec. Dir.

SERVICES PROVIDED FOR YOUR COMPANY: Taping of Ozark Area for Video

ARE YOU PLEASED WITH THE OUTCOME OF THE SERVICES PROVIDED?

[X] YES [ ] NO

IF NOT, WHY?

WAS THE PROJECT OF GOOD QUALITY?

[X] YES [ ] NO

WAS THE PROJECT HANDLED ON A TIMELY BASIS?

[X] YES [ ] NO

IF NOT, PLEASE DESCRIBE ANY PROBLEMS WITH THE PRODUCTION:

WOULD YOU USE THIS SERVICE AGAIN FOR FUTURE PROJECTS?

[X] YES [ ] NO

IF NOT, WHY?

DOES YOUR COMPANY HAVE OTHER NEEDS THAT COULD BE DONE THROUGH THIS OR SOME RELATED MEDIUM?

[X] YES [ ] NO

IF YES, PLEASE DESCRIBE: ~~The work was professional and we~~ would be excited to continue with a similar project.

ADDITIONAL COMMENTS: Cindy & Chris Lanphere's cooperation and professional attitude have been supportive of the Chamber ~~of Commerce Economic Development program~~

THANK YOU FOR YOUR TIME AND CONSIDERATION. THE ARKANSAS VALLEY VO-TECH'S MEDIA PRODUCTION LAB IS PROUD TO HAVE SERVED YOUR SPECIALIZED NEEDS.

SINCERELY,

Cindy Lanphear

CINDY LANPHEAR
A/V PRODUCTION SPECIALIST

An equal opportunity employer

INSTRUCTIONAL MATERIALS EVALUATION FORM

Title Cosmetology Basic Skills ____ Communications ____ Math ____
Technical Area (Specify subject area) Cosmetology Chemistry

1. Was the material easy to understand? ✓ YES ___ NO ___ DOES NOT APPLY

   Readability Level ___ 1 ___ 2 ✓ 3 ___ 4 ___ T
   Comments: Most all students should be able to read the material unless special students

2. Were there enough exercises to reinforce the lesson? ✓ YES ___ NO ___ DOES NOT APPLY
   Comments: some more video should be incorporated

3. Was there enough time to learn the lesson? ✓ YES ___ NO ___ DOES NOT APPLY
   Comments:

4. Was there enough information? ✓ YES ___ NO ___ DOES NOT APPLY
   Comments: Very good information

5. Were the exercises in proper order? ✓ YES ___ NO ___ DOES NOT APPLY
   Comments: some more emphases on time allotted

6. Was the material presented clearly? ✓ YES ___ NO ___ DOES NOT APPLY
   Comments: Very clear

7. Were the instructions difficult to understand? ___ YES ___ NO ✓ DOES NOT APPLY
   Comments: I do not think so unless these are special students

(OVER)

BEST COPY AVAILABLE

8. Do these materials meet your instructional needs?

	Poor	Fair	Good	Excellent
Format:	___	___	___	✓
Content:	___	___	✓	___
Organization:	___	___	___	✓
Readability:	___	___	✓	___
Ease of Use:	___	___	✓	___
Student Acceptance:	___	___	✓	___

Comments: Some students do not accept Chemistry because they do not think they will ever use it in the salon but this is (wrong) thinking on their part.

9. Other likes, dislikes, or problems that you had with the materials.
As stated before, More video Material, More head phones and some More lab-work.

10. Overall rating ____POOR ____FAIR ____GOOD ✓ EXCELLENT

11. Would you recommend this material? ✓ YES ____NO

Signature (optional) Evelyn Whitson Date 3-12-91
Instructor

I was in the teaching of this material in 1990 & thought Cindy did an excellent job.

Most all students said in the beginning More explaination should be given on how and why!!!

BEST COPY AVAILABLE

CHAMBER EXHIBIT -- Shown is the Ozark Area Chamber of Commerce booth at the Arkansas Community Economic Development Fair, held at the Arlington Hotel Exhibit Hall last week in conjunction with the 61st Annual Meeting of the Arkansas State Chamber of Commerce and related events. Chamber manager Mary Yates said the booth featured a video tape of the area prepared by Arkansas Valley Vo-Tech in cooperation with the Chamber. Ozark's contest project book was on display, along with area brochures and maps and products donated by Altus businesses.